

Amendments to the Claims

Claims 1-21 and 23-25 have been withdrawn and replaced by new claims 34-58 of which 34 and 47 are independent claims. No new matter is believed added in the new claims.

1. (withdrawn) A solid laminated ball bat having a predetermined exterior outline, comprising:

an elongated body disposed about a longitudinally extending axis, said body having an outer surface defined by the exterior outline of the bat, said body including a handle on one end and a barrel on the opposite end, said body including a label section connected between said handle and said barrel;

said bat including in at least one of said handle, said barrel and said label section, at least a first plurality of thin strips, each thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other, each said strip further defining a peripheral edge connecting said opposed faces, at least one face of one of said strips being bonded to a face of an adjacently disposed strip, said first plurality of bonded together strips defining a first portion of the bat;

said bat further including in at least one of said handle, said barrel and said label section, at least a second plurality of thin strips, each thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other, each said strip further defining a peripheral edge connecting said opposed faces, at least one face of one of said strips being bonded to a face of an adjacently disposed strip, said second plurality of bonded together strips defining a second portion of the bat;

wherin at least one thin strip of said first plurality of thin strips is composed of a first material;

wherein at least one thin strip of said second plurality of thin strips is composed of a second material;

wherein the density of the first portion of the bat differs from the density of the second portion of the bat; and

wherein the density of said first portion, the density of said second portion, the location of said first portion, and the location of said second portion are selected to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point.

2. (withdrawn) A solid laminated ball bat as in claim 1, wherein the density of said first portion of the bat is substantially uniform and wherein the density of said second portion of the bat is substantially uniform.

3. (withdrawn) A solid laminated ball bat as in claim 1, wherein said bat is a baseball bat.

4. (withdrawn) A solid laminated ball bat as in claim 1, wherein said first and second portions are disposed adjacent to one another.

5. (withdrawn) A solid laminated ball bat as in claim 1, wherein first and second portions are disposed apart from each other.

6. (withdrawn) A solid laminated ball bat as in claim 1, wherein each of said first plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about 1/32nd of an inch to about 1/12th of an inch.

7. (withdrawn) A solid laminated ball bat as in claim 1, wherein each of said second plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about 1/32nd of an inch to about 1/12th of an inch.

8. (withdrawn) A solid laminated ball bat as in claim 1, wherein each of said opposed faces are bonded together by one of an urea resin formulated with a powdered catalyst and a type 1 waterproof glue formulated with a powdered catalyst.

9. (canceled) A solid laminated ball bat as in claim 1, further comprising a sealant applied over said outer surface of the bat.

10. (withdrawn) A solid laminated ball bat as in claim 1, further comprising a catalyzed lacquer protectant applied over said outer surface of the bat.

11. (withdrawn) A solid laminated ball bat as in claim 1, wherein said first material is composed of a cellulosic material, such cellulosic material being selected from the group consisting of: maple, mahogany, ash, cherry, poplar, gum, tupelo and pine.

12. (withdrawn) A solid laminated ball bat as in claim 1, wherein at least one thin strip of said first plurality of thin strips is composed of a composite material.

13. (withdrawn) A laminated ball bat having a predetermined exterior outline, comprising:

an elongated body symmetrically disposed about a longitudinally extending axis, said body having an outer surface defined by the exterior outline of the bat, said body including a handle on one end and a barrel on the opposite end, said body including a label section connected between said handle and said barrel, said barrel having a free end disposed opposite where said barrel is connected to said label section, said handle having a free end disposed opposite where said handle is connected to said label section, said body defining a mid plane disposed transversely relative to said longitudinal axis and midway between said free end of said barrel and said free end of said handle;

said bat including a first plurality of thin strips, each said thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially

parallel to the other plane, each said thin strip further defining a peripheral edge connecting said opposed faces and defining a section of the exterior outline of the bat, at least one face of one of said thin strips being bonded to a opposed face of an adjacently disposed thin strip such that the peripheral edges of said pair of adjacently disposed and bonded thin strips form a first section of the uninterrupted exterior outline of the bat, said first plurality of bonded together thin strips defining a first portion of the bat, said first portion of the bat defining a first outermost face and a second outermost face disposed opposite said first outermost face;

said bat further including a second plurality of thin strips, each said thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other plane, each said thin strip further defining a peripheral edge connecting said opposed faces and defining a section of the exterior outline of the bat, at least one face of one of said thin strips being bonded to an opposed face of an adjacently disposed thin strip such that the peripheral edges of said pair of adjacently disposed and bonded thin strips form a second portion of the uninterrupted exterior outline of the bat, said second plurality of bonded together thin strips defining a second portion of the bat, said second portion of the bat defining a first outermost face and a second outermost face disposed opposite said first outermost face;

said bat further including a third plurality of thin strips, each said thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other plane, each said thin strip further defining a peripheral edge connecting said opposed faces and defining a section of the exterior outline of the bat, at least one face of one of said thin strips being bonded to a face of an adjacently disposed thin strip such that the peripheral edges of said pair of adjacently disposed and bonded thin strips form a third section of the uninterrupted exterior outline of the bat, said third plurality of bonded together strips

defining a third portion of the bat, said third portion of the bat defining a first outermost face and a second outermost face disposed opposite said first outermost face;

wherein at least one thin strip of said first plurality of thin strips is composed of a first material;

wherin at least one thin strip of said second plurality of thin strips is composed of a second material;

wherein the density of the first portion of the bat differs from the density of the second portion of the bat and the length of the first portion of the bat differs from the length of the second portion of the bat; and

wherein the density of said first portion, the density of said second portion, the density of said third portion, the location of said first portion, the location of said second portion, and the location of said third portion are selected to provide for a bat having a center of mass located at a predefined point from the barrel end of the bat.

14. (withdrawn) A laminated ball bat as in claim 13, wherein at least one of said first portion, said second portion, and said third portion have a substantially uniform density.

15. (withdrawn) A laminated ball bat as in claim 13, wherin the density of said first portion of the bat differs for the density of said third portion of the bat.

16. (withdrawn) A laminated ball bat as in claim 13, wherein at least two of said first, second and third portions of the bat are disposed adjacent to one another.

17. (withdrawn) A laminated ball bat as in claim 13, wherein said first, second and third portions of the bat are disposed apart from each other.

18. (withdrawn) A laminated ball bat as in claim 13, wherein each of said first plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about 1/32nd of an inch to about 1/12th of an inch.

19. (withdrawn) A laminated ball bat as in claim 13, wherein each of said second plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about 1/32nd of an inch to about 1/12th of an inch.

20. (withdrawn) A laminated ball bat as in claim 13, wherein each of said third plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about 0.00787 inches to about 0.375 inches.

21. (withdrawn) A laminated ball bat as in claim 13, wherein each of said opposed faces are bonded together by one of an urea resin formulated with a powdered catalyst and a type 1 waterproof glue formulated with a powdered catalyst.

22. (canceled) A laminated ball bat as in claim 13, further comprising a sealant applied over said outer surface of the bat.

23. (withdrawn) A laminated ball bat as in claim 13, further comprising a catalyzed lacquer protectant applied over said outer surface of the bat.

24. (withdrawn) A laminated ball bat as in claim 13, wherein at least one thin strip of said first plurality of thin strips is composed of a cellulosic material selected from the group consisting of: maple, mahogany, ash, cherry, poplar, gum, tupelo and pine.

25. (withdrawn) A laminated ball bat as in claim 13, wherein at least one thin strip is composed of a composite material.

26. (withdrawn) A method of making a laminated ball bat, said method comprising the steps of:

providing a first laminated block, said first laminated block comprising a plurality of successively adjacent thin strips wherein adjacent thin strips are bonded together by a bonding agent;

providing a second laminated block, said second laminated block comprising a plurality of successively adjacent thin strips wherein adjacent thin strips are bonded together by a bonding agent wherein the density of said second laminated block differs from the density of said first laminated block;

bonding said first laminated block to said second laminated block to form a laminated blank;

subjecting said laminated blank to a pressure in a range of about 100 pounds per square inch to about 250 pounds per square inch;

maintaining said laminated blank under pressure in said range until said laminated blank has cured thereby forming a cured laminated blank; and

machining said cured laminated blank to form an elongated body disposed about a longitudinally extending axis, said body having an outer surface defined by the exterior outline of a bat, said body including a handle on one end and a barrel on the opposite end, said body including a label section connected between said handle and said barrel.

27. (withdrawn) A method of making a laminated ball bat according to claim 26, further comprising the step of heating said laminated blank with radio frequency waves during the step of subjecting said laminated blank to pressure.

28. (withdrawn) A method of making a laminated ball bat according to claim 26, wherein said successively adjacent thin strips are composed of veneer strips having a thickness of between about 0.00787 inches to about 0.375 inches.

29. (withdrawn) A method of making a laminated ball bat according to claim 26, wherein said bonding agent is one of a liquid urea resin formulated with a powdered catalyst and a type 1 waterproof glue formulated with a powdered catalyst.

30. (withdrawn) A method of making a laminated ball bat according to claim 26, further comprising the step of applying a sealer to said machined laminated bat thereby creating a sealed bat.

31. (withdrawn) A method of making a laminated ball bat according to claim 26, further comprising the steps of sanding said sealed bat to remove any rough areas from the surface of such sealed bat and applying a coat of catalyzed lacquer to said sanded surface. (canceled) A solid laminated ball bat as in claim 1, wherein said predefined first-point is located a distance of about 6% of the total length of the bat from the barrel end of the bat and said predefined second-point is located a distance of about 18% of the total length of the bat from the barrel end of the bat.

32. (canceled) A solid laminated ball bat as in claim 1, wherein said predefined first-point is located a distance of about 6% of the total length of the bat from the barrel end of the bat and said predefined second-point is located a distance of about 18% of the total length of the bat from the barrel end of the bat.

33. (canceled) A laminated ball bat as in claim 13, wherein said predefined point is located between a distance of about 6% of the total length of the bat from the barrel end of the bat and a distance of about 18% of the total length of the bat from the barrel end of the bat.

34. (new) A solid laminated blank suitable for machining to form a laminated bat, said laminated blank comprising:

an elongated blank body disposed about a longitudinally extending axis, said blank body having an outer surface defined by the exterior outline of the blank, said blank body composed of a plurality of blank portions;

a first plurality of thin strips, each thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other, each said strip further defining a peripheral edge connecting said opposed faces, at least one face of one of said strips being bonded to a face of an adjacently disposed strip, said first plurality of bonded together strips defining a first portion of the blank;

a second plurality of thin strips, each thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other, each said strip further defining a peripheral edge connecting said opposed faces, at least one face of one of said strips being bonded to a face of an adjacently disposed strip, said second plurality of bonded together strips defining a second portion of the blank;

wherein at least one thin strip of said first plurality of thin strips is composed of a first material;

wherein at least one thin strip of said second plurality of thin strips is composed of a second material;

wherein the density of the first portion of the bat differs from the density of the second portion of the bat;

wherein at least one of the length of the first portion of the blank and the width of the first portion of the blank is different from that of the second portion of the blank creating size delta value; and

wherein the density of said first portion, the density of said second portion, the location of said first portion, the location of said second portion, and the size delta value are selected to provide for a blank having a predefined weight distribution.

35. (new) A solid laminated blank as in claim 34, wherein the laminated blank is machined to form a machined elongated body disposed about said longitudinally extending axis, said machined body having an outer surface defined by the exterior outline of a bat, said body including a handle on one end and a barrel on the opposite end, said body including a label section connected between the handle and said barrel.

36. (new) A solid laminated blank as in claim 34, wherein the opposed faces of said first plurality of thin strips are substantially perpendicular to the opposed faces of said second plurality of thin strips.

37. (new) A solid laminated blank as in claim 34, wherein said first plurality of thin strips and said second plurality of thin strips are disposed apart to one another along the width of the bat.

38. (new) A solid laminated blank as in claim 36, wherein said first plurality of thin strips and said second plurality of thin strips are disposed apart to one another along the length of the bat.

39. (new) A solid laminated blank as in claim 34, wherein the density of said first portion of the blank is substantially uniform and wherein the density of said second portion of the blank is substantially uniform.

40. (new) A solid laminated blank as in claim 34, wherein each of said first plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about 1/32nd of an inch to about 1/12th of an inch.

41. (new) A solid laminated blank as in claim 40, wherein at least two thin strips of said second plurality of thin strips have a different thickness.

42. (new) A solid laminated blank as in claim 34, wherein each of said second plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about 1/32nd of an inch to about 1/12th of an inch.

43. (new) A solid laminated blank as in claim 42, wherein at least two thin strips of said first plurality of thin strips have a different thickness.

44. (new) A solid laminated blank as in claim 34, wherein each of said opposed faces are bonded together by one of an urea resin formulated with a powdered catalyst and a type 1 waterproof gluc formulated with a powdered catalyst.

45. (new) A solid laminated blank as in claim 34, wherein said first material is composed of a cellulosic material, such cellulosic material being selected from the group consisting of: maple, mahogany, ash, cherry, poplar, gum, tupelo and pine.

46. (new) A solid laminated blank as in claim 34, wherein at least one thin strip of said first plurality of thin strips is composed of a composite material.

47. (new) A laminated blank having a predetermined exterior outline suitable for machining into a laminated body having a predefined weight distribution wherein said laminated body is used for striking a ball, said laminated blank comprising:

an elongated blank body symmetrically disposed about a longitudinally extending axis and comprising a plurality of laminated blocks including a first, second and third block;

wherein said first laminated block is composed of a first plurality of thin strips, each said thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other plane, each said thin strip further defining a peripheral edge connecting said opposed faces and defining a section of the exterior outline of the block, at least one face of one of said thin strips being bonded to a opposed face of an adjacently disposed thin strip such that the peripheral edges of said pair of adjacently disposed and bonded thin strips form an uninterrupted exterior outline of the block, said first block defining a first portion of the blank;

wherein said second laminated block is composed of a second plurality of thin strips, each said thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other plane, each said thin strip further defining a peripheral edge connecting said opposed faces and defining a section of the exterior outline of the block, at least one face of one of said thin strips being bonded to an opposed face of an adjacently disposed thin strip such that the peripheral edges of said pair of adjacently disposed and bonded thin strips form an uninterrupted exterior outline of the block, said second plurality of bonded together thin strips defining a second portion of the blank;

wherein said third block is composed of a third plurality of thin strips, each said thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other plane, each said thin strip further defining a peripheral edge connecting said opposed faces and defining a section of the exterior outline of the block, at least one face of one of said thin strips being bonded to a face of an adjacently disposed thin strip such that the peripheral edges of said pair of adjacently disposed and bonded thin strips form a third

section of the uninterrupted exterior outline of the blank, said third plurality of bonded together strips defining a third portion of the blank;

wherein at least one thin strip of said first plurality of thin strips is composed of a first material and wherein at least one thin strip of said second plurality of thin strips is composed of a second material;

wherein the density of the first material differs from the density of the second material; and

wherein the length of the first block differs from the length of the second block thereby defining a length delta.

48. (new) A laminated blank having a predetermined exterior as in claim 47, wherein the density of said first block, the density of said second block, the density of said third block, the location of said first block, the location of said second block, the location of said third block, and the length delta are selected to provide for a laminated blank having a center of mass located at a predefined point along said longitudinally extending axis.

49. (new) A laminated blank having a predetermined exterior as in claim 47, wherein the opposed faces of said first plurality of thin strips are substantially perpendicular to the opposed faces of said second plurality of thin strips.

50. (new) A laminated blank having a predetermined exterior as in claim 47, wherein said first block and said second block are disposed apart to one another along the width of the bat.

51. (new) A laminated blank having a predetermined exterior as in claim 47, wherein said first block and said second block are disposed apart to one another the length of the bat.

52. (new) A laminated blank having a predetermined exterior as in claim 47, wherein each of said first plurality of thin strips has a thickness defined as the shortest distance between said

opposed faces and wherein said thickness is between about 1/32nd of an inch to about 1/12th of an inch.

53. (new) A laminated blank having a predetermined exterior as in claim 47, wherein each of said third plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about 0.00787 inches to about 0.375 inches.

CLAIM STATUS

Claims 1-4, 6, 7, 11, 13-16, and 18-20, 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bender et al. 6,007,440 in view of Smith 1,706,680.

Claims 5 and 17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bender et al. 6,007,440 in view of Smith 1,706,680 and Cook 4,714,251.

Claims 8 and 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bender et al. 6,007,440 in view of Smith 1,706,680 and Winterowd et al. 5,944,938.

Claims 9, 10, 22, and 23 stand rejected under 35 U.S.C. §103a as being unpatentable over Bender et al. 6,007,440 in view of Burns et al. 6,506,823.

Claims 12 and 25 stand rejected under 35 U.S.C. §103 as being unpatentable over Bender et al. 6,007,440 in view of You 4,572,508.